

ART 34 AMDT

- 20 -

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SEFAR AG

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New Claims 2 to 16

2. Bioreactor according to claim 1,
c h a r a c t e r i z e d in that
the carrier element (12) has a three-dimensional
structure, in particular it is designed as three-
dimensional fabric.
3. Bioreactor according to claim 1 or 2,
c h a r a c t e r i z e d in that
the carrier element (12) includes a textile carrier
material.
4. Bioreactor according to claim 3,
c h a r a c t e r i z e d in that
- the textile carrier material is surface-treated and
- a bio-compatible surface is formed with a structure
adapted for an adhesion of the organic material.
5. Bioreactor according to any one of claims 1 to 4,
c h a r a c t e r i z e d in that
the receiving device of the flat cell (9) is designed
circularly.
6. Bioreactor according to any one of claims 1 to 5,
c h a r a c t e r i z e d in that
a number of flat cells (9) are arranged as modules in one
flow direction in a parallel and/or serial fashion.

ART 34 AMDT

- 21 -

7. Bioreactor according to any one of claims 1 to 6,
c h a r a c t e r i z e d in that
a control device is provided, by means of which a flow
generating device, a temperature adjusting unit, a gasing
unit, a degasing unit and/or further supply units can be
controlled and/or regulated.
8. Bioreactor according to claim 7,
c h a r a c t e r i z e d in that
- a sensor device is arranged in one flow direction after
the receiving space (13), by means of which physical
and chemical values of state of the nutrient medium can
be determined and
 - the sensor device is connected to the control device.
9. Bioreactor according to any one of claims 1 to 8,
c h a r a c t e r i z e d in that
- a closed, in particular dismountable housing is
provided, in which the receiving device is arranged,
and
 - at least one feed and one discharge are provided for
the nutrient medium as well as an access for
introducing and removing the organic material.
10. Method for cultivating organic material, wherein
- a nutrient medium is at least temporarily put into a
flow,
 - the organic material is introduced into a receiving
device of a bioreactor (11) and
 - the nutrient medium is passed through the receiving
device of the bioreactor (11) for a convective supply
of the organic material,
- c h a r a c t e r i z e d in that

ART 34 ANDT

- 22 -

- a bioreactor (11) according to any one of claims 1 to 9 is used.
11. Method according to claim 10,
c h a r a c t e r i z e d in that
prior to an inoculation or introduction of the organic material into the receiving device this is sterilized.
12. Method according to claim 10 or 11,
c h a r a c t e r i z e d in that
prior to a removal of the cultivated organic material from the receiving device a medium, in particular an enzyme, is introduced for detaching adhered organic material.
13. Method according to any one of claims 10 to 12,
c h a r a c t e r i z e d in that
the direction of flow of the nutrient medium that is passed through the receiving device is changed during the cultivation of the organic material.
14. Method according to any one of claims 10 to 13,
c h a r a c t e r i z e d in that
a chemical and/or physical state of the nutrient medium, in particular a material composition, a stoichiometrical composition, temperature, pressure or rate of flow, are specifically changed in the course of the cultivation.
15. Method according to any one of claims 10 to 13,
c h a r a c t e r i z e d in that
- at least after passing the nutrient medium through the receiving device chemical and/or physical values of state of the nutrient medium are measured,
 - the measured values of state are recorded and analysed in a control device, and

ART 34 AADT

- 23 -

- the measured values of state are employed for controlling and/or regulating the course of the cultivation of the organic material.

16. Method according to any one of claims 10 to 15

c h a r a c t e r i z e d in that

- the nutrient medium is passed through a number of receiving devices, which are arranged to each other in a parallel and/or serial fashion.